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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/650,537
Filing Date: August 28, 2003
Appellant(s): KUELBS, GREGORY G.

Brian E. Harris
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on July 7, 2009 appealing from the
Office action mailed December 15, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

Proceedings involving the patent No. 6,612,713 patent issued to U.S. Application No. 10.068,424 filed on February 7, 2002 are as follows:

1. Civil Action No. 4:05-CV-00373, *World Factory, Inc. v. Southern Sales & Marketing Group, Inc.*, United States District Court for the Northern District of Texas, Fort Worth Division, was dismissed without prejudice on 9 January 2006.
2. Civil Action No. 4:05-CV-374-A, *World Factory, Inc. v. Bond Manufacturing Co.*, United States District Court for the Northern District of Texas, Fort Worth Division, was dismissed without prejudice on 21 November 2005.

The '713 patent is presently the subject of *inter partes* Reexamination Control No. 95/000,104, filed 12 August 2005.

Also, U.S. Application No. 11/199,956, filed 9 August 2005, titled "Umbrella Apparatus," (the "'956 Application") is a continuation of the present Application. A Notice of Appeal was filed in the '956 Application on 3 February 2009, and an appeal brief was filed in the '537 Application on 3 April 2009.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The needed changes are as follows:

Page 9, Issue 2, line 2, "U.S. Patent No. 5,954,417 ("Small '417")" needs to be corrected as -- US Patent 2,863,466 ("Small '466")--.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2,863,466	S. N. SMALL	1201958
2,960,094	S. N. SMALL	11-1960
5,373,287	Doublet	12-1994
5,584,564	Phyle	12-1996
5,954,417	Mai	09-1999
6,058,951	Wilson	05-2000
WO 93/00840	PERRIER et al.	01-1993
JP 9 -168415	OSHIO et al.	06-1997

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 76-81 and 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No.: 2,960,094 (Small) in view of US Patent NO.: 5,954,417 (Mai).

Regarding claims 76, Small discloses umbrella apparatus (Figure 1) comprising:

- A pole portion 10 for outdoor location (Figure 1, column 1, lines 16 and 47); an umbrella portion 11 hingedly coupled to a pole portion 10 (Figure 1, column 1, line 49); the umbrella apportion including radially extending ribs 11' (numeral assigned by the examiner for brevity of the discussion) - including elements 12 and other stretching rib members (not shown) - starching the top 11 (Figure 1, column 1, lines 47-50); a rechargeable electrical power system 35 providing power to the umbrella apparatus (Figure 1, column 2, lines 29 and 30); a solar energy system 34 including a solar collector positioned above the umbrella portion 11 (Figure 1, column2, lines 29-36); the electrical energy converted by the solar energy system conductively coupled to , and recharging the rechargeable electrical power system 35 (Figure 1, column2, lines 29-36); Positioning of the solar collector of the solar energy system 34 keeping the degree of exposure unaffected from opening and closing of the umbrella apparatus (Figure 1).

However, Small does not specifically teach the solar- powered umbrella apparatus further comprising a lighting system including a plurality of light emitting diodes "LEDs" conductively coupled to the rechargeable power system included in the umbrella apparatus.

On the other hand, Mai discloses an umbrella apparatus (Figure 1) comprising:

- An umbrella portion 3 coupled to a pole 10 (Figure 1,column 2, lines 42-46); a lighting system 80" including lighting elements LEDs 83"

conductively coupled to a rechargeable system 82 through wires 831" (Figures 1 and 5, column 3, lines 4-10; and column 4, lines 4-6); the LEDs 83" being recessed within the transparent rib portion 84" – transparent strips integral with the ribs have been interpreted as the rib portions-covering the LEDs 83" (Figure 5, column 4 lines 11-19).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to modify the solar-powered umbrella apparatus of Small by providing the LED-based lighting system as taught by Mai for the benefits enhancing utility of umbrella apparatus by illuminating the area under the umbrella canopy portion.

Further, Small in view of Mai teaches the material covering the LEDs being transparent instead of being translucent as claimed by the applicant.

It would be have been obvious to one of ordinary skill in the art at the time of the invention to provide translucent finish to the light transmitting covering, since it has been held that matters relating to ornamentation only which has no mechanical function cannot be relied upon to patentably distinguish the claimed invention over prior art.

Regarding claims 77, 78, Small in view of Mai teaches the LED covering material being translucent as applied to claim 76 discussed above. However, neither in combination nor individually Small and Mai specifically teaches the translucent material being smooth or textured. The above surface characteristics are considered as ornamental features not affecting mechanical function of the device.

It would be have been obvious to one of ordinary skill in the art at the time of the invention to provide translucent surface with either smooth or textured surface finish to

the light transmitting covering, since it has been held that matters relating to ornamentation only which has no mechanical function cannot be relied upon to patentably distinguish the claimed invention over prior art.

Regarding claim 79 and 80, Small in view of Mai further teaches the translucent material 84" extending beyond – width of the covering material being wider than that of the ribs (Figure 5) - the exterior surfaces of the rib members (Figure 5), and the conductors 831" being carried – covered along with the LEDs 83"- within the rib portion 84" (Mai, Figure 5, column 4, lines 14-18).

Regarding claim 81, Small in view of Mai teaches the solar energy system being operationally coupled to the rechargeable electrical power system, However, neither in combination nor individually Small and Mai specifically teach the solar energy system being releasably coupled to the rechargeable electrical power system.

It would be have been obvious to one of ordinary skill in the art at the time of the invention to make the solar energy system of Small in view of Mai releasable or detachably attached to the electrical power system, since it has been held that making a component removable is a merely a matter obvious engineering choice, and involves only routine skill in the art. USPQ 348, 349 (CCPA 1961). Further, using a solar energy system, which is detachable from the rechargeable electrical power system, would facilitate repair, replacement or maintenance of the umbrella apparatus.

Regarding claim 83, Small in view of Mai discloses the umbrella apparatus further comprising the solar energy system 34 and rechargeable electric power system being disposed n separate housings (Figure 1, column 2, lines 30-36).

3. Claim 82 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No.: 2,960,094 (Small) in view of US Patent NO.: 5,954,417 (Mai) as applied to claim 76 above, and further in view of US Patent 2,863,466 (Small '466).

Regarding claim 82, Small in view of Mai discloses the outdoor umbrella apparatus including: a top housing receiving the solar energy system 35– broadly interpreted as a cap - and a rechargeable battery 35 – broadly interpreted as a rechargeable electrical power system - positioned adjacent the solar energy system 34 (Small, Figure 1).

Small further teaches that the rechargeable batteries may be positioned anywhere, including external or internal of the post 10 (Small, Figure 1, column 2, lines 28-36). However, Small does not specifically teach: the top cap used to hingedly connecting the umbrella portion to the pole portion; and the rechargeable electrical power system received in the top cap portion.

On the other hand Small '466 discloses an umbrella apparatus (Figure 1) including an umbrella portion – canopy - (not shown) supported by a plurality of ribs each connected to a top cap 27 for hingedly connecting the umbrella portion to the pole 28 (Figure 1, column 2, lines 20-29).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the umbrella apparatus of Small in view of Mia by positioning the rechargeable batteries within the housing receiving the solar energy system, since it has been held that rearranging parts of a prior art structure involves only routing skill in the art. *In re Japikse*, 86 USPQ 70. Further, positioning of rechargeable power sources

– batteries – within the housing receiving a solar energy system would operate equally well, and would be compact with less wiring.

4. Claim 84 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No.: 2,960,094 (Small) in view of US Patent NO.: 5,954,417 (Mai) as applied to claim 76 above, and further in view of US Patent 5,584,564 (Phyle).

Regarding claim 84, Small in view of Mai discloses the outdoor umbrella comprising a rechargeable battery disposed in a housing mounted on the umbrella pole as applied to claim 76 discussed in section 3 above. However neither Small nor Mai specifically teaches the battery housing surrounding the umbrella pole as claimed by the applicant.

On the other hand, Phyle discloses an outdoor umbrella (Figures 9 and 10) comprising: batteries 60 received in a housing 10; and the housing 10 surrounding the umbrella pole 20 (Figures 9 and 10, column 3, lines 58-67; and column 4, lines 1-7).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the umbrella apparatus of Small in view of Mia by positioning the rechargeable batteries within the housing surrounding the umbrella pole as taught by Phyle for the benefits of mounting the housing with no interfere with the vertical motion of the umbrella slide, and fir easy excess for replacements of batteries.

5. Claims 85 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No.: 2,960,094 (Small) in view of US Patent NO.: 5,954,417 (Mai) and US Patent 5,584,564 (Phyle) as applied to claim 84 above, and further in view of WIPO publication WO 93/00840 (Perrier et al.).

The following examination is based on the English translation of Perrier et al. Hereafter, the above-indicated English translation has been referred as “the English translated text”.

Regarding claim 85, Small in view of Mai and Phyle discloses the umbrella apparatus including a rechargeable electric power system charged with a solar energy system as applied to claim 84 discussed in section 5 above. However, neither in combination nor individually, Small, Mai and Phyle teaches AC-based rechargeable power system conductively coupled to at least one rechargeable battery receive power from an AC power outlet.

On the other hand, Perrier et al. discloses an outdoor umbrella apparatus (Figure 1) comprising:

- A lighting powered with an electric power system via the electrical cable holder 17 connectable to electrical power system 3 – including batteries 3 – rechargeable with a solar energy system 2 – operationally a transformer is a part of the battery-charger connected to the rechargeable battery- (Figure 1, English translated abstract and text).

Further, Perrier et al. teaches the umbrella apparatus including the rechargeable electrical power system capable of receiving power from an AC power outlet through a power plug 14 (Figure 1, English translated abstract and text).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the outdoor umbrella apparatus of Small in view of Mai and Phyle by providing the rechargeable power system – operationally equipped with a

transformer - receiving power from the AC power outlet as taught by Perrier et al. for the benefits of redundant power sources desirable for high operational reliability and availability of the umbrella apparatus.

Further, neither in combination nor individually Small, Mai, Phyle and Perrier specifically teaches the transformer equipped with the recharging system is releasably coupled to the power system charger.

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the outdoor umbrella apparatus of Small in view of Mai and Phyle by providing the rechargeable power system – operationally equipped with a releasable transformer, since, it has been held that constructing a formerly integral structure in various separable elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

6. Claims 86-89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent No. JP 9168415 (Oshio) in view of US Patent No.: 2,960,094 (Small).

The following examination is based on the English translation provided by the Advanced Industrial Property Network (AIPN) of the Japanese Patent Office. Hereafter, the above-indicated English translation has been referred as “Oshio”.

Regarding claim 86, Oshio discloses an umbrella apparatus (Figures 1 and 3) comprising:

- A top cap 12 coupled to a pole 4 (English translated Oshio, Figures 2a and 3b); a plurality of ribs 3 hingedly coupled to the top cap 12 (English

translated Oshio, Figures 2a and 3b); a flexible canopy 2 carried by the ribs 2 (English translated Oshio, Figures 2a and 3b); power supply batteries 8 energizing the umbrellas apparatus (English translated Oshio, Figures 2a and 3b)' the power supply batteries positioned below the canopy (English translated Oshio, Figures 2a and 3b); a lighting system electrically powered lighting elements LEDs 7a1-7a6, 7b1-7b6 7c6 – carried by the ribs 3, and conductively coupled to and powered by the power system 8 (English translated Oshio, Figures 2a and 3b).

Oshio teaches the power system including a battery – a power system - instead of a rechargeable power system as claimed by the applicant.

On the other hand, Small discloses an umbrella apparatus (Figure 1) comprising: a flexible canopy 1 being adjacent to the top and the solar energy system 34 (Small, Figure 1); a rechargeable electrical power system 35 rechargeable by a solar energy system 34 – operationally required to include a battery charger - (Small, Figures 1 and 3, column 2, lines 28-31 and 54-64).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to modify the outdoor umbrella apparatus of Oshio by providing and positioning the rechargeable electrical power system operationally coupled with a solar energy system as taught by Small for the benefits of cost saving resulting from: the least- cost solar energy, longer operational life of batteries, and high operational reliability of the umbrella apparatus.

Regarding claims 87 and 89, Oshio in view of Small discloses the umbrella apparatus additionally including:

- Wiring 9 passing through the interior portion of the pole 4 for conductively coupling light emitting diodes – LEDs-, included in the lighting system, to the rechargeable batteries (English translated Oshio, Figures 2a, 3b and 4); and
- The LEDs 7s positioned in recessed channel in the rib members 3 (English translated Oshio, Figures 2a, 3b and 4).

Regarding claim 88, neither in combination nor individually Oshio and Small does not specifically teach solar energy system being releasably coupled to top cap via threaded connection.

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the outdoor umbrella apparatus of Oshio in view of Small by providing the solar energy system releasably coupled to the top cape with a threaded connection, it has been held that constructing a formerly integral structure in various separable elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179. Mounting of a solar energy system in releasable manner would promote cost effective replacement and maintenance of the device.

7. Claims 90-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent No. JP 9168415 (Oshio) in view of US Patent No.: 2,960,094 (Small) as applied to Claim 86 above, and further in view of Wilson (US Patent No.; 6,058,951) and Doublet (US Patent No. 5,373,287).

Regarding claims 90 and 91, Oshio in view of Small discloses the outdoor umbrella apparatus comprising a manually operable switch 10 (English translated Oshio, Figures 2a, 3b and 4) actuating the lighting system. However, neither in combination nor individually Small and Mai teaches the switch being remotely controllable with signals sent from a wireless transmitter to a receiver.

On the other hand, Wilson ('951) discloses a remote-controlled, outdoor umbrella apparatus (Figure 1) including: an electric motor 1 for opening and closing the umbrella (Figure 1, column 2, lines 30-41); cut-off switches 12 and 13 cutting off the power to the electrical motor operationally coupled to the umbrella actuators 5 and 15 (Figure 1, column 3, lines 5-9); the switches 12 and 13 remotely controlled by signals sent from a central control locations (Figure 1, column 1, lines 23-32).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the umbrella apparatus of Oshio in view of Small by providing remote control system as taught by Wilson ('951) for the benefits of actuating the lighting system remotely in response to weather changes. Further, neither combined nor individual teaching of Oshio, Small and Wilson ('951) teaches the outdoor, remotely controlled, electrically powered umbrella apparatus, as discussed above, further including a remote control system operable with signals sent from a wireless transmitter to a receiver.

On the other hand, Doublet ('287) discloses a remote control system including a receiver 25 positioned the housing of an apparatus, and a wireless transmitter 9 held by the operator (Figures 1 and 2, column 3, lines 40-53).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the umbrella apparatus of Oshio in view of Small and Wilson) by providing remote control system with wireless transmitter and a receiver as taught by Doublet ('287) for the benefits of actuating the lighting system remotely in response to weather changes.

Regarding claim 92, Oshio in view of Small, Wilson and Doublet discloses the umbrella apparatus further comprising:

The wireless command signal switching the light system- with elements LEDs 7a1-7a6, 7b1-7b6 7c6 –between varying levels of light output with light output varying circuit 11 (English translated Oshio, Figures 2a and 3b).

Response to Arguments

Argument: Regarding independent claims 76-81 and 83, Small '094 does not teach:

- an umbrella apparatus including a plurality of light emitting diodes (LEDs) conductively coupled to a rechargeable power system;
- the umbrella apparatus including ribs having anything in their recesses; and
- the ribs 11' are not taught by Small '094, but are recited by the Examiner

Response: As discussed in section 2 above, Small '94 does not specifically teach the solar- powered umbrella apparatus further comprising a lighting system including a plurality of light emitting diodes "LEDs" conductively coupled to the rechargeable power system included in the umbrella apparatus. Therefore, the umbrella apparatus of the reference Small '094 has been modified with Mai's teaching of its umbrella. The umbrella disclosed by Mai including LEDs in the umbrella ribs, and the LEDs being conductively coupled to the rechargeable power system, and being recessed in the transparent rib portions.

Further, for brevity of the discussion, the Examiner has assigned the numeral 11' for the combination of the following elements.

- The combination rib member 12 and other rib members (not shown) stretching the top member 11 (Figure 1, column 1, lines 47-50).

A conventional collapsible umbrella would require radially extending ribs enabling stretchability of a canopy. Refer to section 2 above.

Argument: While combining teachings of Small '094 and Mai for the rejection of Claim 76, the Office specifically cites Mai, Figure 5, column 4, lines 11-19. However, the above cited portion of Mai

teaches the LEDs installed along, rather than recessed within the rib members of the umbrella. Thus, Mai teaches away from the claimed invention. The above argument is also applied to the claim 82 dependent on Claim 76.

Response: Mai teaches the LEDs 83" being recessed within the transparent rib portions 84" – the transparent strips or tubes 84" integral with the ribs have been interpreted as portions of the rib members receiving LEDs (Mai, Figure 5, and column 4, lines 11-19 and 20-31). Refer to section 3 of the office action mailed on December 15, 2008.

The above response is also applicable to the claims 82, 84 and 85, each dependent on Claim 76.

Argument: Regarding claim 86, and its dependent claims 87-89, the proposed combination of Oshio and Small '094 fails to teach a solar energy system releasably coupled to a top cap.

Response: As discussed in section 7 of the office action mailed on December 15, 2009, Oshio does not teach a use of a solar system for its umbrella apparatus. On the other hand, Small '094 discloses an umbrella apparatus including a solar system 34 positioned adjacent to the canopy and at the top portion of the umbrella post.

However, Small '094 does not specifically teach the solar system being releasably mounted on the top portion of the umbrella post.

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the outdoor umbrella apparatus of Oshio in view of Small by providing the solar energy system releasably coupled to the top cape, since it has been held that constructing a formerly integral structure in various separable elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179. Mounting of a solar energy system in releasable manner would promote cost effective replacement and maintenance of the device.

Argument: Regarding claim 86, and its dependent claims 87-89, the proposed combination of Oshio and Small '094 fails to teach a flexible canopy between and adjacent to both the top cap and the solar energy system.

The above argument is also applied to the claims 87-92 dependent on Claim 86.

Response: Oshio in view of Small '094 discloses the umbrella apparatus – a conventional umbrella (Figures 1 and 2, Column 1, lines 47 and 48) further including: the flexible canopy 11 positioned between the top cap, operationally required for conventional umbrella but not

shown, bearing the solar system 34 and the solar system 34 (Small '094, Figures 1 and 2).

Note: Normally a conventional umbrella includes a plurality of ribs bearing a flexible canopy on their tops. Thus, as shown in figure 1, the flexible canopy 11 does pass between the top and the solar system.

The above response is also applied to the claims 87-92 dependent on Claim 86.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Hargobind S Sawhney/
Primary Examiner, Art Unit 2885

Conferees:

Jose G Dees
/Jose' G. Dees/
T-QAS TC 2800

Jong-Suk (James) Lee
/J. L./
Supervisory Patent Examiner, Art Unit 2885